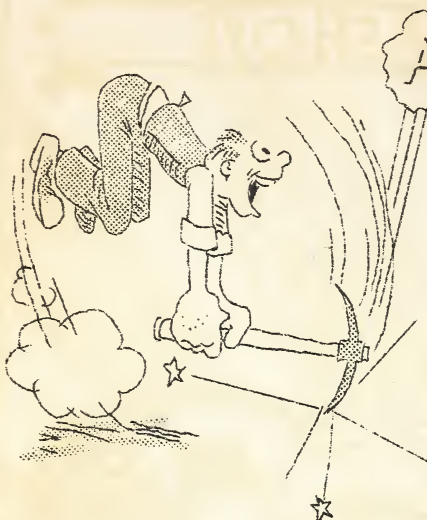


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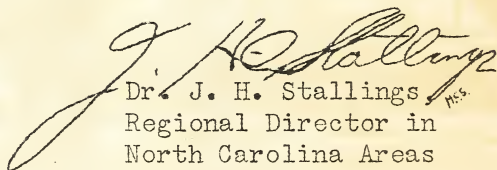
TARHEEL WASH OFF





ACTUAL EROSION CONTROL work on the 45,000 acre Reedy Fork project has begun. Soils experts are making erosion surveys; cooperative agreement men are in the field working out programs for the individual farms; engineers are laying out and supervising the construction of terraces and terrace outlets; foresters are planning a forestry program for the area; specialists in wildlife conservation are supervising planting operations for supplying sufficient food and cover for game birds and other beneficial wildlife; and men and women, clerks, stenographers and assistants in the office in Greensboro, keep busy compiling records, devising erosion control plans for the farmers in the area and handling the routine duties of a busy office.

THE REEDY FORK PROJECT is off to a flying start and we wish to continue this erosion control project at a steady pace. To do that it requires the wholehearted cooperation and support of the farmers and landowners living in the Reedy Fork area. We invite you to work with us in helping to thwart the greatest menace to American civilization-- EROSION!


Dr. J. H. Stallings, Pres.
Regional Director in
North Carolina Areas

O, HEAR YE, REEDY FORK FARMERS

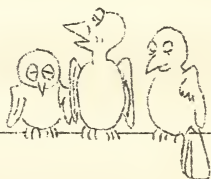
IN A PROGRAM OF EROSION CONTROL of the type being conducted in the Reedy Fork area, the agreement men perhaps occupy the most strategic position of any. The entire program of erosion control, as a matter of fact, is mapped out by the farmer and the agreement man.

AN INVITATION TO YOUR FARM is an indication of your interest and is in no way an obligation. Such an invitation will bring a cooperative agreement man to your farm with an aerial map on which your farm boundaries and the soils information is given. With this as a guide you will work out a plan that is agreeable to both you and the cooperative agreement man. All your problems will be considered in making a plan which enables you to hold the soil where it is today and use it to the best advantage.

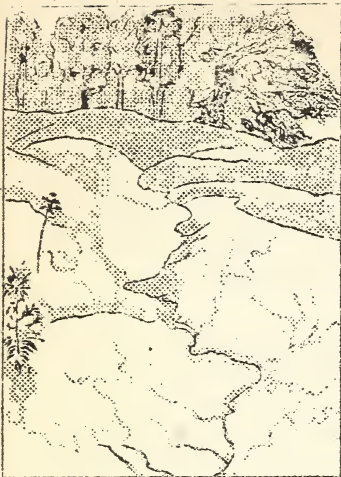
THE FARMERS ARE LINING UP with about as fast as we can get to them and we are trying to work as fast as possible in getting the complete area under erosion control work. It will require a long time to visit every farmer in the area. We appreciate those who have come to the office to inform us of their interest, and we are making every effort to get to them within the next few days. Any others who are anxious to get started should call at the office in the old Post Office building in Greensboro and let us know or drop us a card. We want to work where we are also wanted.



BE AN EARLY BIRD!



NATURAL CONTROL OF EROSION



THE REEDY FORK AREA furnishes striking illustrations of the fact that forestry is one of the best means of preventing and controlling soil erosion. The steepest slopes which have been cleared and cultivated were abandoned long ago because of severe sheet erosion and gullying.

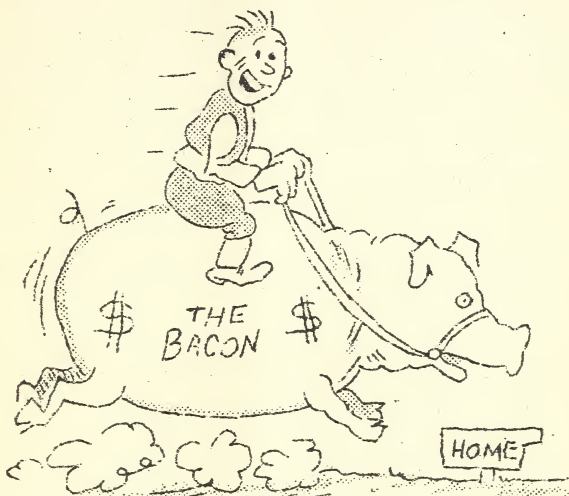
THOSE SAME FIELDS on which old rows are often still visible have in most cases gone back to trees, and the loss of soil has been entirely stopped by natural means. This is especially true where there was an abundance of seed trees adjacent to such fields, and where grazing and fire have been excluded to protect the young growth of trees. Where grazing has been permitted and fires have gone through, the process of reclaiming and stabilizing has been considerably retarded.

WHY NOT HEED THIS EXCELLENT EXAMPLE and assist nature in controlling erosion? Instead of waiting for the trees to reproduce, plant trees on eroded or abandoned fields. In this way the most valuable products can be obtained in the shortest period of time. The Soil Erosion Service is furnishing seedlings of the most valuable rapid-growing trees to reforest eroding areas.

THE EXISTING TIMBERLAND in the area is very much in need of better management. The sleet storm of February, 1934, has damaged severely almost all of the woodlands, and as a result such stands are in poor condition.



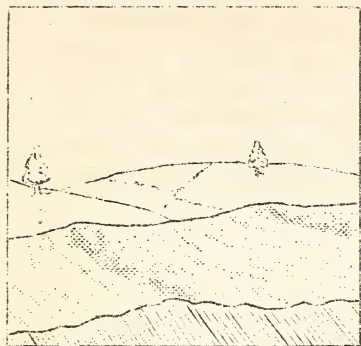
CONSCIENTIOUS EFFORT WILL greatly improve the growth and value of our woodlands and make a genuine forest, not an aggregation of trees of any and every size, shape and description growing together. Let's get an Old World attitude and make the best and fullest use of our greatest natural resource-- THE LAND!



ATTENTION -- REEDY FORK FARMERS!

THE SOIL EROSION CONTROL movement is the people's movement, promoted by their government in Washington. Projects have been established where they were in great need and where the landowners were most expressive of their willingness to cooperate in the program. It is therefore urged that the farmers of this area "climb upon the band wagon" and support the movement. Those who are undecided can drift along. If and when they make up their minds, we hope it will still be possible to work with them.

MECHANICAL EROSION CONTROL



MECHANICAL METHODS of erosion control constitute the means employed by the engineering department in carrying out its part in a soil conservation program. Knowledge of the principles involving the effect of water in motion and at rest are co-ordinated with practical

measures effective in control of erosion. Chief among these is the laying out and construction of proper terrace systems, and the design and construction of desirable control structures in terrace outlets, outlet channels and in gullies.

TERRACES ARE CONSTRUCTED BROAD in width and with gentle sloping sides so that cultivation of the field is in no way hampered. Spacing between terraces is dependent upon the slope and soil type and varies slightly with the different systems of cropping. The purpose of the terrace is to intercept the run-off of rain water, divert it along the terrace channel at a low velocity, and discharge it into a suitably protected outlet. In addition, terraces aid in conserving more moisture in the soil.

TERRACES ALONE ARE NOT ADEQUATE for controlling erosion. They serve as an aid in protecting the field at times when there is but little vegetative cover, and in a field of newly plowed land. Since our heaviest rainfall occurs at a time when fields are most apt to be bare of cover, terraces are of inestimable value to the farmer.

WHY MAKE A SOIL EROSION MAP?

THE SOILS DEPARTMENT makes an individual survey of each farm, showing in detail the location of each soil type, erosion class, slope and cover. Wooded areas are indicated by timber and height classes. Such data, together with the general recommendations of the soils department, is used as a basis for working out the farm plans and agreement with the Soil Erosion Service. The purpose of such a map is to give the farmer an accurate picture of just what his farm is today.

THERE ARE SEVERAL SOIL TYPES in the Reedy Fork area, differing not only in color, texture and structure, but also in their chemical composition. Chemical analysis shows that the various soil types contain different amounts of plant food elements. All of the soils in this area are low in nitrogen and phosphoric acid. The Cecil and Appling types are relatively high in potash but low in lime. The Mecklenburg, Iredell and Davidson soils are low in potash but relatively high in lime. Such variations in chemical composition means that the crops for which they are best adapted will vary.

STUDIES BY THE SOILS DEPARTMENT show serious erosion in every section of the area except virgin woodlands. Most of the pine-timbered tracts are on soils abandoned due to excessive washing and gullying.

THE MAP IS A GUIDE SHEET whereby the farmer can check the previous treatment his farm has had. It also helps the farmer select crops and cropping methods by which he can conserve the soil left on his farm.

AGRONOMY



WITHOUT A DOUBT VEGETATIVE GROWTH is the best single means of controlling and checking erosion. When a crop rotation is established on a field, more vegetative growth results on the field, which not only aids in controlling erosion, but improves the fertility of the soil.

A PRACTICE OF STRIP ROTATION on each field has proved to be a fine method of checking erosion and building up the fertility of the soil. For example, a six acre field may be divided into three two-acre sections and a three year crop rotation practiced. Popular crops for the rotation would be corn, two acres; small grain, two acres; and lespedeza, two acres. Corn should follow lespedeza, small grain should follow corn, and lespedeza should follow small grain.

SOME DEFINITE SYSTEM OF ROTATING CROPS to encourage and increase vegetative growth will be planned for each farm in the Roedy Fork area by our cooperative agreement men and the farmers themselves. In order to get the cropping plans or rotations started, the agronomy department has arranged to supply seed, lime, and fertilizer which each farm plan calls for, as arranged by the cooperative agreement men and the farmers. All the materials, such as seed, lime and fertilizer, that we furnish cooperators, are for the purpose of controlling erosion, or the establishment of new methods of farming which directly control erosion.

WILDLIFE CONSERVATION IN REEDY FORK

THE NECESSITY FOR THE CONSERVATION AND DEVELOPMENT of wildlife in the Reedy Fork area is obvious. Unless proper means of promoting a definite wildlife program are adopted, this area will in a few years witness a marked scarcity of game birds and other wildlife which is so valuable in the controll of erosion.

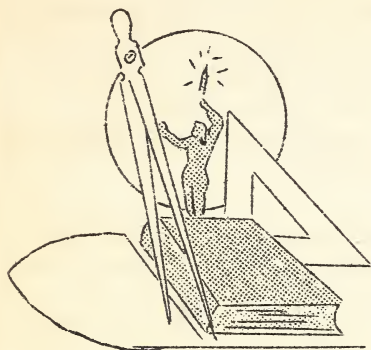
AN INCREASED NUMBER OF HUNTERS--and farm practices which have destroyed sufficient food and cover for wildlife--have caused a steady decrease in the supply of game. Although the farmer should acquaint himself with plant life, he should also know the different forms and habits of animal life, both beneficial and harmful forms.

A STUDY OF THE FOOD HABITS OF GAME throughout the Reedy Fork erosion control project has begun and in the near future food and cover plants will be introduced on many farms in the area. Full cooperation of the farmers is earnestly requested.

SOME BIRDS PLAY A VERY IMPORTANT PART in the control of insects, vermin control and seed distribution. The wildlife program plays a vital part in erosion control. For example, galled areas which are without doubt to become gullies (canyons to this area) will be sown to lespedeza in order to establish a sod. Larger gullies and terrace outlets are to be planted to a variety of shrubs which furnish food and cover during both winter and summer.

MORE THAN FIFTEEN VARIETIES OF SEED ARE TO BE FURNISHED by the Soil Erosion Service for food strips chosen satisfactorily with the farmer and the wildlife department.

THE DRAFTING AND SURVEYING DEPARTMENT



DRAFTING AND SURVEYING department of the Soil Erosion Service, under the direction of Mr. W. F. Freeman, is the connecting link between the work in the field and the several departments. In brief, the work consists in making and printing, drawings, sketches, plans, specifications, maps, charts, graphs and tracings from notes compiled by the men working in the field.

WORK IS DONE HERE for the agronomy, soils, forestry, game conservation, publicity and the maintenance divisions. Also drawings have been made for buildings and structures at the CCC camps located in the Deep River watershed. The work covers three different projects: Deep River, Reedy Fork and Brown Creek.

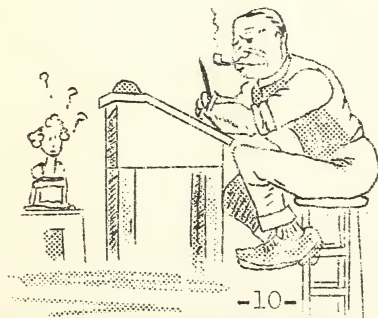
THIS DEPARTMENT MAKES the first contact with the farmers in the area. A crew is sent out in the field to determine the boundary lines and corners of all the farms. This is done by means of aerial pictures and the aid of each landowner. The farmer shows the boundary surveying party each corner of his land and from this the boundary lines are plotted on the aerial map. The soils men then survey the soil, place their information on the picture by means of symbols, and when finished there is a complete map of each farm, showing boundary lines, fields, woods, streams, roads, houses, types of soil and the presence of gullies. Three duplicates are then copied from the original, one for the agronomy de-


partment, another for a permanent record; and the third is cut into individual farms which are mailed out with each cooperative agreement.

INDIVIDUAL SOIL TRACINGS and prints are made of each farm and also a culture sheet, showing suggestions for erosion-control and a five-year plan of crop rotation as worked out by the agronomy department. Separate field tracings are made from staking party notes, showing terraces, ditches, and proposed check dams. Each aerial map is scaled down and a composite key map showing roads, streams, individual farms and farm numbers is made. This is an aid to the various departments in locating individual farms in the areas.

FOR USE OF THE FORESTRY department a series of drawings for road beautification of the High Point-Greensboro highway has just been completed. Many farm enlargements from the photographs have also been drawn for the forestry department to be used as experimental plots. Drawings have also been made showing sub-marginal lands in the Deep River and the Brown Creek areas. Several charts and graphs have been completed for the wildlife department, as well as maps for game preserves.

A GROUP OF LECTURE CHARTS has been drawn for the use of the extension and agronomy departments. Some of the items in these lecture charts are cross-sections showing the construction of terraces, strip cropping, row planting and plowing in relation to terraces.





EDITORIALS

THE TARHEEL WASHOFF

Published monthly by the Soil Erosion
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Deep River and Reedy Fork Areas.

Federal Building--High Point, N. C.

Regional Director--Dr. J. H. Stallings.

Editor--Forney A. Rankin.

Contributors--SES Staff Members.

VOLUME I March 15, 1935 NUMBER 8

THE PURPOSE OF THIS PUBLICATION is to serve as an information and news bulletin for the farmers and landowners in the Deep River and Reedy Fork erosion control areas, and for all other people and agencies interested in the fight being carried on by the Soil Erosion Service in North Carolina.

SOIL EROSION IS NOT A THEORY; it is as real as life itself. It is like a cancer in that it slowly but surely eats away the life blood of the land--the topsoil. Like a robber it steals our wealth, causing untold misery to millions who through the loss of their fertile soil have been forced to eke out a livelihood on sub-marginal land, or else leave the farm for the industrial centers, where another story of misery and sorrow is often told in unemployment, social wars and general economic chaos.

THE FIGHT AGAINST EROSION is not simply a physical war where mechanical structures, vegetative cover, forests and agronomic programs are coordinated in an effort to control rainwash. This is also an educational war. Any movement, such as the Soil Erosion Service program, involving a multiplicity of conflicting social, economic and political ideals as well as a variety of natural conditions, to be successful must have the cooperation and support of the people with whom it deals. The people of this country must know of the danger of erosion and the necessity for a system of national planning whereby the conservation and development of our natural resources are effected. It is therefore our hope that through the efforts of this organization, by the use of the press, the radio, through public appearances, the schools and colleges, we can instill in the minds of our people the necessity for cooperation in the erosion control movement.

-oOo-

WE WISH TO EXPRESS OUR GRATITUDE AND THANKS to Lieutenant Stelling and the enrollees of Company 434, CCC, who have worked diligently in the publication of this booklet. We are particularly grateful to Lieutenant Stelling, who so willingly consented to do the drawings in the booklet, and to Leader Herman L. Swann, who typed the stencils for the mimeograph machine.

DOMINANT SOILS IN DEEP RIVER

HELENA AND WILKES SANDY LOAM:

DESCRIPTION: Virgin areas. Surface soil--gray sandy loam 1 to 3 inches deep, and yellowish-gray sandy loam to a depth of 7 to 16 inches. Subsoil--yellow or yellowish-brown or yellowish-gray clay, often rather compact and slightly plastic. Underlying material--a mixture of gray, yellow and greenish-black rotten rock.

DERIVATION: These soils are formed from a mixture of acid and basic rocks, chiefly pegmatic granite cut at frequent intervals by dikes of diorite.

HELENA AND WILKES SOILS are the most variable in the Deep River area. There is no uniformity to the surface soil, to the subsoil or to the underlying rock, except in very small bodies. In many local areas there is no development of the subsoil at all, the surface soil resting directly upon the rock material. Locally there may be 18 to 24 inches of loose friable sandy loam upon the partially-weathered rock. A short distance removed we may find a well-developed subsoil layer, but almost no surface soil even in undisturbed wood tracts. Then, within a few feet, one may find a normal soil. If cultivated, the surface soil may be a uniform light gray throughout the field, or the surface may be spotted, with patches of yellow or brown showing here and there.

OCCURENCE: Chiefly throughout the central part of Deep River area, occupying approximately 45% of the total acreage.

TYPOGRAPHY: Wilkes soil is found on the more broken areas--usually above 11% slope. Helena occurs on level to rolling areas, the slopes ranging between 3% and 7%.

FERTILITY: Varies widely. In general these soils are only low in nitrogen, and contain relatively small proportions of phosphoric acid and potash. They possess a high degree of acidity.

CROP ADAPTATION: Wilkes soil is suited only to timber or permanent pasture. The more sandy bodies of Helena produce excellent tobacco and truck. Not adapted to grain or clovers.

DEGREE OF EROSIVENESS: Helena and Wilkes Sandy Loams are the most erosive soils in the area. They are especially susceptible to sheet washing and slow gully-ing.

CONTROL MEASURES: Vegetative means of control, such as broad and narrow strip-cropping, rotations, and winter cover crops. Contour tillage. The soil does not lend itself well to terracing because of its extreme variability.



MUNICIPAL LAKE PROPERTY IMPROVEMENT



APPROXIMATELY SIX MILES of the High Point municipal lake shore line were planted during the early autumn with 25,000 shrubs having large root systems to protect the shore line from washing due to wave action. Road approaches on the north and west forks of the lake have been landscaped and 8,215 pieces of shrubbery, ornamental trees and vines have been planted on an area of 11,301 square yards to control excessive soil washing and to beautify those two places that in the past have been unsightly. In less than eight months since the inception of the program, the whole landscape surrounding the lake has been transformed into a veritable panorama of sylvan beauty.

ON THE 175 ACRES OF OPEN FIELDS in the city lake property requiring planting, all but 21 acres have been completed. Over 103,000 tree seedlings have been planted to species of pine, red cedar, walnut, hickory, oak, ash, Chinese tallow tree, black locust, and box alder. The remaining 21 acres of open fields yet to be planted are not being completed until fencing is erected on the boundaries to protect the plantations from grazing and trespass.

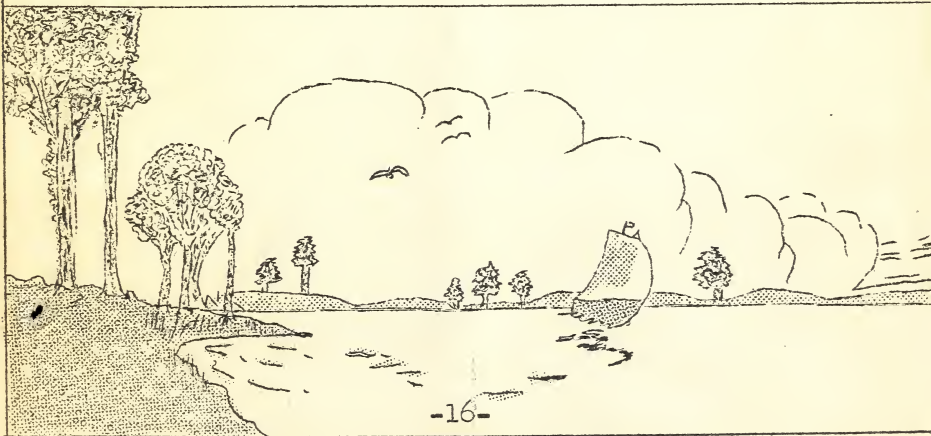
A NUMBER OF EXPERIMENTS IN TREE PLANTING were carried on in connection with the work, such as: different methods of spacing trees, the special treatment of badly-eroded areas with mulching, and the introduction of new species. The Chinese tallow tree, an introduction to this particular region, will be watched with inter-

est. From the nuts of this tree a valuable oil is extracted for use in soap making.

TEN THOUSAND LINEAR FEET OF FIRELANES have been burned along the roads and a portion of the property boundary, as a precaution to protect the planted areas from fire. Further plans call for additional fire breaks through the larger timbered tracts to break them into smaller units for better protection against fire and administrative purposes.

IN THE FUTURE 3,500 pounds of lespedeza seed will be sown on the eroded areas to give added and immediate ground cover and to more thoroughly hold the soil intact. When complete tree planting and seeding have been carried out, the area will serve as a demonstration in the use of vegetation in controlling erosion, and also lay the basis for future yields of valuable forest products.

IN ADDITION TO THE PLANTING OPERATIONS at the High Point city lake, timbered stand improvement work has been done on approximately 474 of the 510 acres of forest land. This work has been primarily a salvage cutting, removing damaged and diseased trees which if left would subject the entire watershed to the danger of injury from fire and insects.

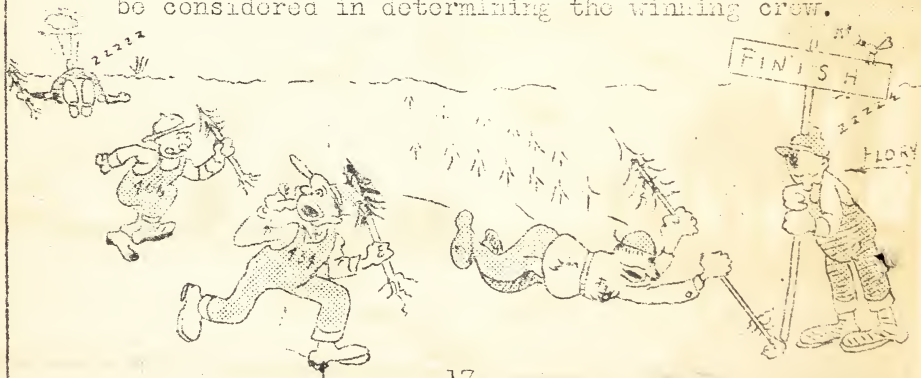


NOW HOLD YOUR HATS AND DON'T GET EXCITED! We are neither advertising an auction sale nor operating the Ferris Wheel at the carnival. But the SES and the CCC are preparing to put on the biggest show this old community has ever seen. Grease up the harness, put the shoes on old Dobbin, and plan to attend the GALA DAY tree planting contest to be held in a big field near the CCC camps on March 29, 1935.

SIX CREWS OF CCC BOYS will line up at one end of the field; twelve men to a crew (to be selected from each crew by lot), the six mattock men on each crew standing on a line across one end of the field with the six planters on each crew standing behind. The No. 1 Mattock Man on each crew will be guided by two stakes set in a line at right angles to the starting line. At a given signal the crews will start the usual method of planting with a twelve man crew. The contest will probably last about one hour (this is to be determined by the size of the field selected for the contest).

MR. FLORY, CHIEF FORESTER of the Soil Erosion Service, Mr. Newland and Mr. Carter, Assistant Foresters, will act as judges in determining the winning crew, which will be selected on the following basis:

Efficiency in planting the seedling, alignment of the rows and speed in planting. The supervision of the planting will be handled by the CCC leaders and assistant leaders only. The quality of leadership displayed will also be considered in determining the winning crew.



LOBLOLLY PINE SEEDLINGS of equal size and condition will be selected by the judges for this contest.

THE MERCHANTS OF HIGH POINT are being asked to contribute prizes to be distributed among the members of the winning crews.



A POEM

Present lust, easy going;
Fat accounts our bank books hold;
But to us our streams are showing
Grim results of waste untold.

Future plans, nature gave us
Power to keep what we possess.
Trained experts are trying to save us,
Through the efforts of the S. E. S.

Always mindful of each other,
And the aid we have at hand,
In that we'll help each other
Save our chief asset-- THE LAND.

--Roy Montgomery.





WILDLIFE CONSERVATION

THE WILDLIFE DIVISION of the Soil Erosion Service is doing some wild scrambling to get our proposed developments underway. It is very apparent that if our program is to be developed satisfactorily it will be necessary for the farmers to have odd corners, field borders and the like, which are to be sown with wildlife foods, ready to be planted so that when the seeds are provided there will be no delay in getting them into the ground.

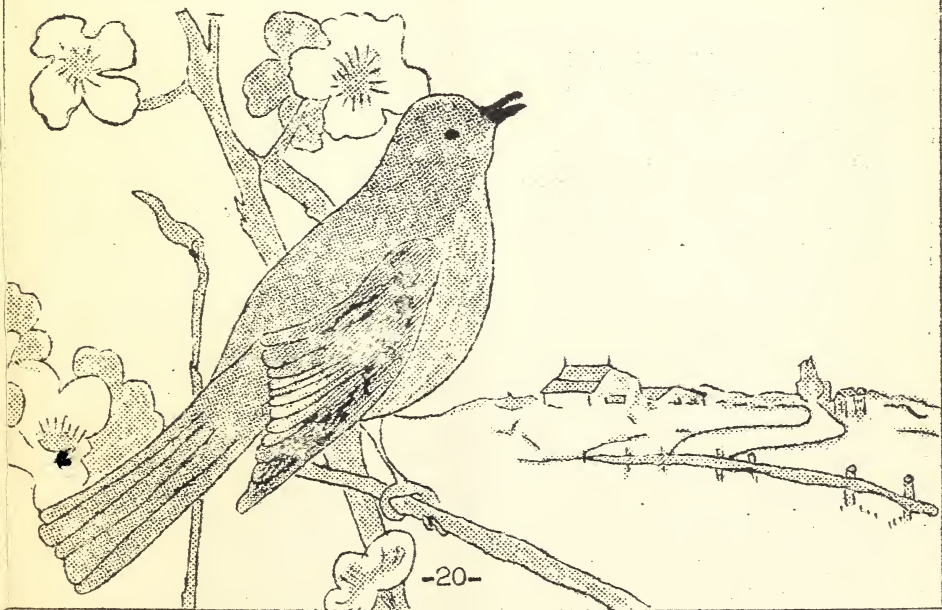
IT SHOULD BE REALIZED that our plantings be supplementary. We hope the farmers will cooperate in other ways to provide food for desirable wildlife forms.

THIS MIGHT BE DONE in several ways. Strips of lespedeza left around, if not more than four feet wide, will provide considerable food. Terraces planted with soy beans and cow peas will be very desirable. Many lespedeza fields contain gall spots or other relatively unfertile areas where the stand of lespedeza is not very dense. When mowing the hay, if these spots can be left they will supply food and provide more protection for the soil. In addition they will reseed themselves and thereby provide better soil covering the following year.

WHEN CUTTING WHEAT AND OTHER GRAINS it would be advisable to leave a small area uncut in the corners of each field.

MANY FARMERS CUT THEIR FENCE ROWS and ditch banks and plow every foot of land if possible. This as a rule is harmful to quail and other beneficial insect and weed-seed eating birds. The general impression is that such field borders are unsightly. To those who realize their importance in providing food and cover for beneficial wildlife they form a welcome sight. If they might be looked at as a part of the set-up on the farm which makes possible a course of pleasure and profit, more of them will be protected.

IF IT IS DESIRABLE TO CUT FENCE ROWS it might be possible to cut them on a two year rotation basis, cutting a strip, say, six rods long and leaving the next six rods. The next year the remaining six rod strips could be cut, and so on. This would provide good cover and considerable food for each year.



THE USE OF LIME

IN A HUMID SECTION such as North Carolina the tendency of all soils is toward acidity. There are two reasons for such a condition: In the first place, the basic compounds are removed from the soil more rapidly than are the acid compounds. A condition of acidity in the soil is also found to be present because certain materials applied to the land, such as some kinds of fertilizers and sprays, leave an acid residue.

PRONOUNCED SOIL ACIDITY is unfavorable in a greater or lesser degree to nearly all cultivated plants. This condition in the soil may be corrected most easily and cheaply by the application of some form of lime. In the erosion-control areas of North Carolina millions of pounds of lime are applied to the soil as an erosion control measure and the results are particularly favorable.

LIME NEUTRALIZES ACIDS in the soil and sweetens it. By adding calcium and magnesium it enriches the soil and aids in the development of thicker and stronger growth, which will hold the topsoil on the land, and thereby control erosion. It is easy to apply to the land and the cost will be more than repaid in the increased production of crops where it is applied.

"LAND THAT IS USED FOR FARMING is worth only as much as its ability to produce crops, no more," it has been justly said. When a farmer buys or rents land, he is making a purchase of its capacity to produce. Any practice or treatment that makes land more productive increases its value. Liming is such a practice. In North Carolina the farmer must learn to conserve and build up his soil or else decreased yields will continue.

GULLY CONTROL PLANTING OPERATIONS

THE SEEDING OF GULLIES and badly eroded fields on the cooperating farms in the Deep River and Reedy Fork areas began on a large scale the last week of February. The Soil Erosion Service is making every effort to establish on such badly eroded fields a permanent vegetative cover that will halt the ravages of erosion and at the same time produce a sufficient cover and a suitable supply of food for wildlife.

IN VIEW OF THE FACT that there is less than a month left during which gully seeding operations can be carried on, it is imperative that farmers give their utmost cooperation and assistance to the program. Farmers are urged to furnish whatever teams and tools they may have in order to complete the program as soon as possible. The oft-repeated expression "The more cooperation that is realized from the farmer, the more the Soil Erosion Service can do for him" is certainly applicable in regard to gully planting operations.

THE MAJORITY OF BADLY ERODED FIELDS are being planted, or will be planted within the next few days, to forest trees. Until such trees become well established, a ground cover of lespedeza will keep in check erosion that is now going on. The engineering, agronomy and wildlife departments of the Soil Erosion Service are cooperating in planting terrace outlets and terrace outlet channels with a mixture of Italian rye, tall oat grass, orchard grass, red top and lespedeza.

THE PURPOSE OF SOD in terrace channels is to protect them from the eroding force of water flowing through them. The Soil Erosion Service therefore urges the farmers in the Deep River and Reedy Fork areas to do whatever minor repair work that is necessary after heavy rains in order that a thick mat of sod can become established.

THE BRIDGE BUILDER.

An old man, traveling a lone highway,
Came at the evening cold and gray,
To a chasm deep and wide.

The old man crossed in the twilight dim,
For the sullen stream held no fears for him.
But he turned when he reached the other side,
And builded a bridge to span the tide.

"Old man," cried a fellow pilgrim near,
"You are wasting your strength with building
here;

Your journey will end with the ending day,
And you never again will pass this way.

"You have crossed the chasm deep and wide,
Why build you a bridge at eventide?"
And the old builder raised his old gray head:
"Good friend, on the path I have come," he
said,

"There followeth after me today
A youth whose feet will pass this way.

"This stream, which has been as naught to me,
To that fair-haired boy may a pit-fall be;
He too, must cross in the twilight dim--
Good friend, I am building this bridge for
him."

--Miss Will Allen Dromogoole.

